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ABSTRACT OF THE DISCLOSURE

In a system for detecting misfire for an internal combustion engine wherein ionization current that flows following the discharge current is detected and integrated during a period (gate) and occurrence of misfire of the engine is detected based on the integrated value, a processing delay circuit is provided which inputs at least one of the discharge current or the ionization current and based on the inputted current, delays starting of the period by a time point which is not earlier than termination of the discharge current. With this, the system is unaffected by fluctuation in ignition coil discharge period, various kinds of noise and the like, and can therefore ensure accurate misfire detection by preventing erroneous detection owing to such causes.